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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,709	02/01/2001	Daisaku Horie	44239-076	3392

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WASHINGTON, DC 20005-3096

EXAMINER

SELBY, GEVELL V

ART UNIT PAPER NUMBER

2615

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,709

Applicant(s)

HORIE, DAISAKU

Examiner

Gevell Selby

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 9, 10 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9, 10 and 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/28/05 has been entered.

Response to Arguments

2. Applicant's arguments, see amendment, filed 9/28/05, with respect to the rejection(s) of claims 1-3, 9-12, 17, 19 and 21 have been fully considered and are persuasive. The 35 U.S.C. 103 rejections of claims 1-3, 9-12, 17, 19 and 21 have been withdrawn.

3. Applicant's arguments filed 9/28/05 in regard to claims 13-16, 18, 20, and 22 have been fully considered but they are not persuasive. The applicants submit that the prior art does not disclose the following limitation of the claimed invention: "for every set of two images that are joined together, said corresponding points are set based on one of the two divided images located further remotely from a region where at least three partial images including the other of the two divided images overlap with each other" as claimed in claims 13, 18, and 20. The examiner respectfully disagrees.

Examiner's Reply

In regard to claim 13, 18 and 20, the Katayama reference discloses that the upper left edge on the first image in figure 18 is the reference image in combining images 1 and 2; however

Art Unit: 2615

when combining image 3 to the divided images, image 2 becomes the reference image and for each pair combined the first of those images becomes the reference image and then the coordinates are changed to parameters with respect to reference O (see column 9, lines 50-56).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3, 9, 10, 12, 19 and 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The term "great" in claims 1, 9, and 19 is a relative term which renders the claim indefinite. The term "great" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "great number of" has been rendered indefinite because of the use of the term "great". It is not clearly defined how many images make up a "great number of" images.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-16, 18, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752.

In regard to claims 13 and 20, Cullen, US 6,038,349, discloses the image processing device and method comprising the steps of:

obtaining a plurality of divided images produced from divided portions defined in a subject and having partially overlapping regions (see column 11, lines 4-8);

detecting a direction of positional shift between the two divided images having the overlap regions overlapping with each other (see column 11, lines 4-15);

setting a plurality of sets each including corresponding points in said two divided images based on the detected positional shift direction (see column 11, lines 4-15); and

joining said two divided images based on the set corresponding point sets (see column 11, lines 25-30).

The Cullen reference does not disclose that said corresponding points are set based on one of the two divided images located further remotely from a region where at least three partial images including the other of the two divided images overlap with each other.

Katayama et al., US 6,424,752, discloses an image synthesis apparatus and method wherein said corresponding points are set based on one of the two divided images (images 1 and 2) located further remotely from a region where at least three partial

Art Unit: 2615

images (images 1, 2, and 6) including the other of the two divided images overlap with each other (see figure 18 and 19 and column 10, lines 26-57). The Katayama reference discloses that the upper left edge on the first image in figure 18 is the reference image in combining images 1 and 2; however when combining image 3 to the divided images, image 2 becomes the reference image and for each pair combined the first of those images becomes the reference image and then the coordinates are changed to parameters with respect to reference O (see column 9, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752, to have for every set of two images that are joined together, said corresponding points are set based on one of the two divided images located further remotely from a region where at least three partial images including the other of the two divided images overlap with each other, in order that only two images at a time are needed for processing thus saving memory.

In regard to claim 14, Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752, discloses the image processing method according to claim 13, wherein, characteristic points corresponding to each other and located in the overlap regions of the divided images are detected based on the detected positional shift direction, and the detected characteristic points are set as the corresponding point set (see Cullen: column 9, lines 49-55).

In regard to claim 15, Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752, discloses the image processing method according to claim 14, wherein, the

characteristic point is detected in the overlap region of one of said two divided images, a point corresponding to the detected characteristic point is detected in the overlap region of the other divided image, and a set of said characteristic points is set as the corresponding point set (see Cullen: column 10, lines 29-40).

In regard to claim 16, Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752, discloses the image processing device according to claim 14, wherein, the characteristic points are detected in the overlap regions of said two divided images, respectively, and a set of the characteristics points corresponding to each other is set as the corresponding point set (see Cullen: column 11, lines 4-15).

In regard to claim 18, Cullen, US 6,038,349, discloses a computer readable medium bearing an image processing program the program, when executed, causing a computer to execute the steps of:

- obtaining a plurality of divided images produced from divided portions defined in a subject and having partially overlapping regions (see column 9, lines 33-47);

- detecting a direction of positional shift between the two divided images having the overlap regions overlapping with each other (see column 9, lines 49-55);

- setting a plurality of sets each including corresponding points in said two divided images based on the detected positional shift direction (see column 11, lines 16-30); and

- joining said two divided images based on the set corresponding point sets (see column 11, lines 16-30).

The Cullen reference does not disclose that said corresponding points are set based on one of the two divided images located further remotely from a region where at

least three partial images including the other of the two divided images overlap with each other.

Katayama et al., US 6,424,752, discloses an image synthesis apparatus and method wherein said corresponding points are set based on one of the two divided images (images 1 and 2) located further remotely from a region where at least three partial images (images 1, 2, and 6) including the other of the two divided images overlap with each other (see figure 18 and 19 and column 10, lines 26-57). The Katayama reference discloses that the upper left edge on the first image in figure 18 is the reference image in combining images 1 and 2; however when combining image 3 to the divided images, image 2 becomes the reference image and for each pair combined the first of those images becomes the reference image and then the coordinates are changed to parameters with respect to reference O (see column 9, lines 50-56).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752, to have for every set of two images that are joined together, said corresponding points are set based on one of the two divided images located further remotely from a region where at least three partial images including the other of the two divided images overlap with each other, in order that only two images at a time are needed for processing thus saving memory.

In regard to claim 22, Cullen, US 6,038,349 in view of Katayama et al., US 6,424,752, discloses the image processing device according to claim 13, wherein the

Art Unit: 2615

corresponding points set by said setting portion include corresponding points separated from each other by a prescribed distance (see Cullen: column 11, lines 4-8).

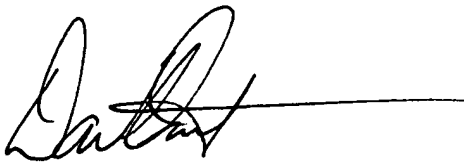
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



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